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Gordon Walker
and
Raymond Thietart

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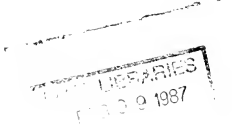
STRATEGIC CONSISTENCY, SYNERGY AND BUSINESS PERFORMANCE

Gordon Walker
Sloan School of Management
MIT
Cambridge, MA 02139
(617) 253-2574

and

Raymond Thietart
ESSEC
BP 105
95021 Cergy Cedex
France
011-33-14-341-2333

Business Policy and Planning Division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STRATEGIC CONSISTENCY, SYNERGY, AND BUSINESS PERFORMANCE

The research presented in this paper 1) operationalizes a type of strategic consistency at the business level, 2) compares the effect of strategic consistency on business unit performance to that of a less parsimonious model of operational consistency, and 3) identifies differences in the strategic consistency effect between businesses that share activities extensively with other businesses in the corporation (high synergy) and businesses that do not share activities extensively (low synergy). The results show that there is a substantial tradeoff between corporate level synergy and intra-business unit consistency.

The concept of consistency has become central to normative and empiricial statements about achieving high performance in organizations (Child, 1975; Galbraith, 1977; Peters and Waterman, 1984). In this paper we examine the relationships between types of consistency associated with the three prototypical levels of strategy in organizations: corporate, business, and operational (Hofer and Schendel, 1978). Strategic consistency at the corporate level involves correlating investments in functions that reinforce each other across individual business units to achieve the firm's goals (see for example, Porter, 1985, Chapter 10). Strategic consistency at the business level involves investing concurrently in functions within the business unit that together support the achievement of the unit's goals. Operational consistency can be defined as correlating investments in the various activities that comprise a function within the business unit and, in the context of the unit's strategy, that together support the achievement of the function's goals.

Although operational consistency need not be in conflict with consistency at the business level and may in fact contribute to it when the business unit manager has the power to correlate multiple investments across functions, business and corporate consistency may be incongruent. When activities are shared across businesses, investments in these activities must be coordinated by the businesses involved. As a result, business unit managers lose some of their control over these activities within their units and so the degree of strategic consistency within the business may be decreased. Porter (1985: p. 332) calls this effect of inter-unit sharing the cost of compromise. The purposes of the present paper are to demonstrate first, that strategic consistency at the business level can be operationalized and related to unit performance more parsimoniously than a model of operational consistency and second, that the power of the strategic consistency model to explain performance is

higher for business units which share a small percentage of their activities with other units in the corporation, and therefore whose costs of compromise are low, than for units which share more of their operations and whose costs of compromise are high.

In the present research we limit our definition of strategic consistency within the business unit to concurrent investments in marketing and quality. Investments in marketing are broken down into sales force, advertising and promotion expenditures. Investments in quality encompass expenditures made in activities across the value chain (see Porter, 1985, Chapter 4) including service. To the extent the types of marketing expenditures are correlated, the business has achieved operational consistency in this function. Similarly, because quality is an outcome not a function, to the extent measures of quality are correlated, the business has achieved operational consistency for the activities that contribute to this goal.

The strategic value of the association between investments in marketing and quality has been proposed from three different perspectives. First, Nelson (1974) has proposed that marketing expenditures serve as signals of quality and thereby alert consumers to the product's valuable characteristics. Second, in a similar vein, Porter (1985, Chapter 4) makes the distinction between signalling and use criteria as components of purchasing decisions from suppliers following a generic business strategy of product differentiation. Our model involves subsets of the two criteria he mentions: marketing operations involve signalling; quality is related to use. Both are necessary, but neither alone is sufficient to achieve high performance (Porter, 1985, p. 140). Last, Klein and Leffer (1981) have argued that the effect of marketing expenditures is not due to signalling but to the demonstration of supplier commitment to the level of quality in the product; buyers should be more

willing to purchase a product when they know that the supplier has sunk high irretrievable costs into selling it and thereby implicitly ensures that the level of quality will be maintained over the long term.

Because the association between investments in marketing and quality can be justified on theoretical grounds a priori, strategic consistency can be specified separately from its relationship to performance; and this relationship can then be tested. With the present model, furthermore, we are able to test whether the strategic consistency model that is a more parsimonious rendering of the relationship between performance and business-level investments than the operational consistency model, is also a better predictor of performance (Schoeffler, Buzzell and Heany, 1974; Zeithaml, Anderson and Paine, 1981). This comparison illuminates the difference between strategic and operational level investments, as mentioned above. Finally, by defining strategic consistency at the business level as joint investments in activities within a business unit, we can examine the effects of inter-unit sharing of these activities in the corporation on the focal unit's achievement of consistency and thus compare potential conflicts between inter-unit synergy and intra-unit consistency.

Our deductive approach to consistency can be contrasted to Hambrick's (1983) inductive method of building a contingency theory of strategy for industrial goods, businesses and Galbraith and Schendel's (1982) inductive method of identifying strategic types that vary in their relationships to performance. Our approach also differs from Drazin and Van de Ven's (1985) operationalization of "fit" through its association with work unit performance. These alternative methods do not so much test specific hypotheses as uncover underlying patterns in the data. Models of strategic consistency, such as ours, that are theoretically derived rather than derived from the data should be methodologically more robust and lead to a stronger tradition of theory development.

MODELS

In Figure 1, strategic consistency is represented as a second order factor which explains the correlation between first order factors, representing operational consistency in marketing and quality. The first order factors in turn explain the correlations between investments in specific marketing activities and between measures of the quality of products and services provided by the business.

Insert Figure 1 About Here

Figure 2a shows the relationship between strategic consistency and business performance measured as return on investment, and between strategic consistency and market share which, albeit controversially (Rumelt and Wensley, 1981), may also influence return on investment. The model in which operational but not strategic consistency influences return on investment and market share is shown in Figure 2b.

Insert Figure 2 About Here

Both the strategic (Figure 2a) and operational (Figure 2b) consistency models may be fit to data and a measure of their goodness of fit obtained (see Bentler and Bonett, 1980). The explanatory value of the concept of strategic consistency, as operationalized in the present research, can be determined by comparing the goodness of fit indices of the two models. Our first research question is:

1. Does the strategic consistency model explain the relationships between business performance and investments in marketing and quality as well as the less parsimonious operational consistency model?

If there is no significant difference in fit between strategic consistency and the operational consistency models, we can accept the former as a more

powerful representation of the relationship between the investment behavior of the business unit and its performance.

We also want to show that the explanatory power of the strategic consistency model is higher for business units that do not share their operations extensively with other units in the corporation. To this end, we choose the inter-unit sharing of marketing activities and of facilities (plant and equipment) to indicate synergies across businesses in the corporation. To demonstrate the effect of inter unit sharing on the explanatory value of the strategic consistency model in the present research we compare the extreme cases of high sharing of both production facilities and marketing activities and low sharing of these functions. Our second research question then is:

2. Does the strategic consistency model explain the relationships between business performance and investments in marketing and quality better in the low sharing subsample of businesses than in the high sharing subsample?

The goodness of fit of the strategic consistency model should be lower in the high sharing subsample of business units, whose managers are assumed to be less able to achieve strategic consistency because of resource allocation compromises with other units, than in the low sharing business units which are less constrained by corporate synergies.

DATA AND METHODS

We test our models on businesses in the SPI4 version of the PIMS database using the last year of data for each business. This source of data is controversial (Wensley, 1982) but is consistently used by business strategy researchers because of its breadth, size, and general quality (Ramanujam and Venkatraman, 1984).

A number of authors (Phillips, Chang and Buzzell, 1983) have shown that the validity of business strategies varies substantially over types of business. We chose components businesses for our sample. For several

reasons components businesses are appropriate for studying the questions we have posed. First, Porter (1985, p. 345) points out that one of the major costs of sharing component fabrication facilities is conflict over quality goals. Second, the production technologies and marketing activities of components businesses typically may be either specialized or generalizable to other businesses. As a result, the subsample of components producers is likely to have a broad distribution of inter-unit sharing.

In the present study, business unit resource allocation decisions for marketing activities and the extent to which quality outcomes have been achieved were measured relative to the unit's three most important competitors in the "served market", a carefully defined version of the market in which the unit sells its products that is particularly appropriate to the competitive bidding process through which components are sold. Business performance is indicated by return on investment; and like marketing and quality variables, market share is measured relative to that of important competitors.

The structural equation models shown in Figure 2 were tested using LISREL (Joreskog and Sorbom, 1982), a full information maximum likelihood estimation technique. There are several advantages of this method. First, measurement error may be specified and estimated at the same time as strategic and operational consistency and their effects on market share and performance. This characteristic of the analysis addresses objections to the PIMS data on the grounds that questionnaire data contain contaminating subjective biases. Second, the second order factor model (Figure 2a) through which strategic consistency is specified can be estimated simultaneously (Weeks, 1980) rather than sequentially, as would normally be done using more restricted factor analytic techniques. Third, LISREL produces a chi-square statistic as a measure of goodness of fit;

and this measure can be compared across models to determine their relative explanatory power.

RESULTS

The correlation matrices for the high and low sharing subsamples are found in Table 1. The business units were placed in the low sharing subsample if they shared less than ten percent (median split) of their plant and equipment and less than ten percent (median split) of their marketing activities with other units in the corporation. Likewise, high sharing businesses shared more than ten percent of plant and equipment and of marketing activities with other corporate units.

Insert Table 1 About Here

Table 2 shows the result of the LISREL analysis for the operational and strategic consistency models for both subsamples. Standardized scores are presented. The chi-square goodness of fit value of each model is presented below it.

Insert Table 2 About Here

The loadings of (relative) investment in the three marketing activities on marketing consistency and of the measures of quality on quality consistency are high and significant in both high and low sharing subsamples indicating that achieving consistency within (as opposed to between) operations is not hampered by multi-unit participation in marketing or production. Furthermore, in both subsamples, marketing and quality consistency both load significantly on strategic consistency, although the loadings are lower for the high sharing subsample, as expected.

The expectation, stimulated by research question one, that the goodness of fit of the strategic consistency model would not be significantly different from that of the operational consistency model is confirmed for both high and low sharing subsamples. For the high sharing subsample the chi-square difference is .13 with 1 degree of freedom, $p = .70$. And for the low sharing subsample the difference is 1.7, $p = .21$. Also, the goodness of fit of the strategic consistency model is substantially higher for businesses that have a low degree of inter-unit sharing within their corporation than for businesses that share marketing and production facilities more extensively. Research question two is thus answered in the affirmative.

Interestingly, in both the operational and strategic consistency models the variance explained in performance is higher for low sharing than high sharing businesses. Also, strategic consistency explains roughly 25% of the variance in performance in the low sharing subsample; and this estimate is roughly 25% more than the variance explained by the marketing and quality variables independently in the operational consistency model for this subsample.

Likewise, for the high sharing businesses, strategic consistency explains a greater proportion of the variance in performance (13.5%) than do marketing and quality alone. However, for high sharing businesses neither the effect of strategic consistency nor the independent effects of marketing or quality on performance are significant. Note, moreover that for the high sharing subsample, both operational and strategic consistency models provide only marginally acceptable fits using at $p = .05$ as the cutoff for acceptability (see Bagozzi, 1980).

For both high and low sharing subsamples, strategic consistency explains more variance in market share than do separate investments in marketing and quality; however, in contrast to return on investment,

market share is better predicted in the high sharing than in the low sharing businesses. As the operational consistency model demonstrates, this reversal is due primarily to role of quality in the two subsamples. In low sharing businesses quality influences performance more than it influences market share; in the high sharing subsample quality predicts market share almost three times more strongly than it predicts performance. However, the effect of quality on market share does not influence performance indirectly since performance and market share are not significantly related. This result is consistent with early findings for this relationship (Schoeffler, Buzzell and Heany, 1974) which indicated that the association between market share and ROI is more likely to occur for goods that are purchased less frequently, on average, than components. In the absence of a detailed analysis of the markets in which the components produced by our sample businesses are sold, these results tentatively suggest that these markets reward specialized producers using differentiation strategies (see Porter, 1980, Chapter 7; Hax and Majluf, 1984, Chapter 7) and that low sharing businesses are better able to exploit opportunities to achieve high performance through intra-unit coordination rather than inter-unit synergies.

DISCUSSION

In the present study we have operationalized a particular type of strategic consistency, the performance advantages of which were proposed on a number of theoretical grounds, and demonstrated the superior predictive power of this construct over a model in which operations influenced performance independently and directly.

Furthermore, as expected, the explanatory power of strategic consistency was greater in businesses that did not share marketing and production activities with other businesses in the corporation. The costs

of inter-business unit compromise to accomplish corporate-level synergies apparently overrode the benefits provided by synergy to the units themselves; such benefits, as they related to a differentiation strategy, should have appeared at least in the results for the operational consistency model but did not. These results show that it is important to control for the involvement of a business unit in inter-unit sharing when examning the effects of investments in operations on performance and that combinations of investments may be more powerful predictors of performance than the investments alone (see Hambrick, 1983).

It should be emphasized, however, that we have chosen one approach to strategic consistency, one approach to inter-unit sharing at the business level, and one type of business in which to test our propositions. By specifying strategic consistency as a second order dimension with which marketing investments and quality outcomes are correlated, we restricted our investigation to differentiation as a type of business strategy and thus could not explore the potential cost benefits associated with inter-unit sharing (Porter, 1985, pp. 343-349). It is not clear, however, how correlations in cost reducing investments across the value chain within a business might be separated from correlated investments made at the corporate level. Examining Porter's (1985) list of the advantages and disadvantages of activity sharing across businesses in a corporation, for example, indicates that the advantages of pooling at the corporate-level are for the most part cost-related, and therefore support cost leadership strategies at the business level. Disentangling corporate and business investments might therefore be difficult. The disadvantages which the results of our study demonstrate characterize constraints on business units to differentiate themselves. Although we do not examine businesses with low cost strategies, it is likely that they will experience higher benefits from sharing. The

results of this study therefore have interesting implications for the standard rationale for "related" corporate diversification (Rumelt, 1974; Christensen and Montgomery, 1982; Shelton, 1985), specifically, that the strategies of the businesses which are involved in synergistic relationships need to be considered for these relationships to be rationalized as leading to higher performance.

However, it is possible that the measures of inter-business sharing we selected were too limited to capture the benefits sharing can provide. Porter (1985), again, makes the distinction between tangible inter-unit relationships, such as we have described, and intangible relationships comprised of inter-unit transfers of know-how. Marketing and production facilities are only two of the many types of tangibles that business units may share; others include technology and procurement. A fuller examination of the effects of synergy on business strategy including a broader range of tangible and untangible relationships is called for (see Wells, 1984).

Furthermore, our results are limited to businesses producing components. Other types of businesses may show dissimilar results because of differences in the effect of marketing and quality variables on market share and performance (see Phillips, Chang and Buzzell, 1983), and in the distributions of intercorporate sharing of marketing and production facilities across businesses due to the general adoption of generic facilities or the demands of functional specialization.

Finally, our study is one of the few that attempts to take constrct validation using the PIMS data seriously (Ramanujam and Venkatraman, 1984; Phillips, Chang and Buzzell, 1983). We validated not only first order constructs as is typically done, but the second order construct of strategic consistency. Our model and method can be contrasted with the configuration oriented approaches of authors with more complex models of

consistency that have so far defied large sample empirical testing (Galbraith and Nathanson, 1978; Peters and Waterman, 1984). Expanding the content and generalizability of the model, especially to include strategic decision making over time, is clearly a next step.

TABLE 1

Correlation Matrices for High and Low Sharing Businesses

High Sharing Businesses

Return on investment	1.00							n=176
Relative market share	.22	1.00						
Relative sales force	-.02	.04	1.00					
Relative advertising	.16	.24	.41	1.00				
Relative promotion	.08	.10	.38	.63	1.00			
Relative product quality	.22	.35	-.10	.13	.11	1.00		
Relative service quality	.09	.31	-.01	.17	.09	.41	1.00	
Relative image for quality	.18	.32	.06	.14	.18	.55	.59	1.00

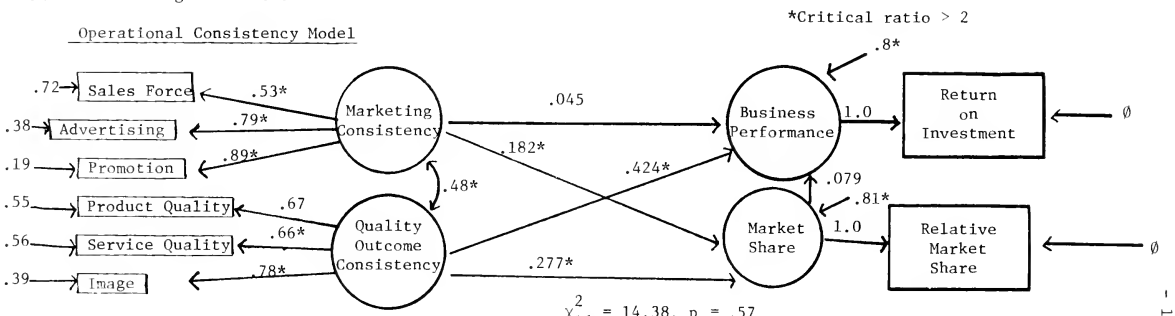
Low Sharing Businesses

Return on investment	1.00							n=210
Relative market share	.25	1.00						
Relative sales force	.16	.11	1.00					
Relative advertising	.19	.31	.39	1.00				
Relative promotion	.22	.29	.49	.71	1.00			
Relative product quality	.35	.29	.26	.23	.28	1.00		
Relative service quality	.26	.24	.16	.29	.29	.43	1.00	
Relative image for quality	.34	.32	.19	.33	.31	.51	.53	1.00

Table 2

Results of LISREL Tests of Strategic and Operational Consistency Models in High and Low Sharing Businesses

A. Low Sharing Businesses



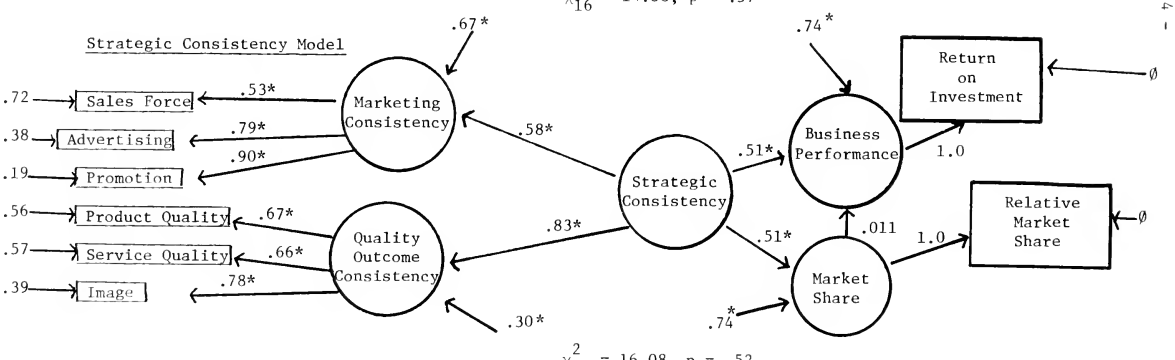


Table 2 (cont.)

Results of LISREL Tests of Strategic and Operational Consistency Models in High and Low Sharing Businesses

B. High Sharing Businesses

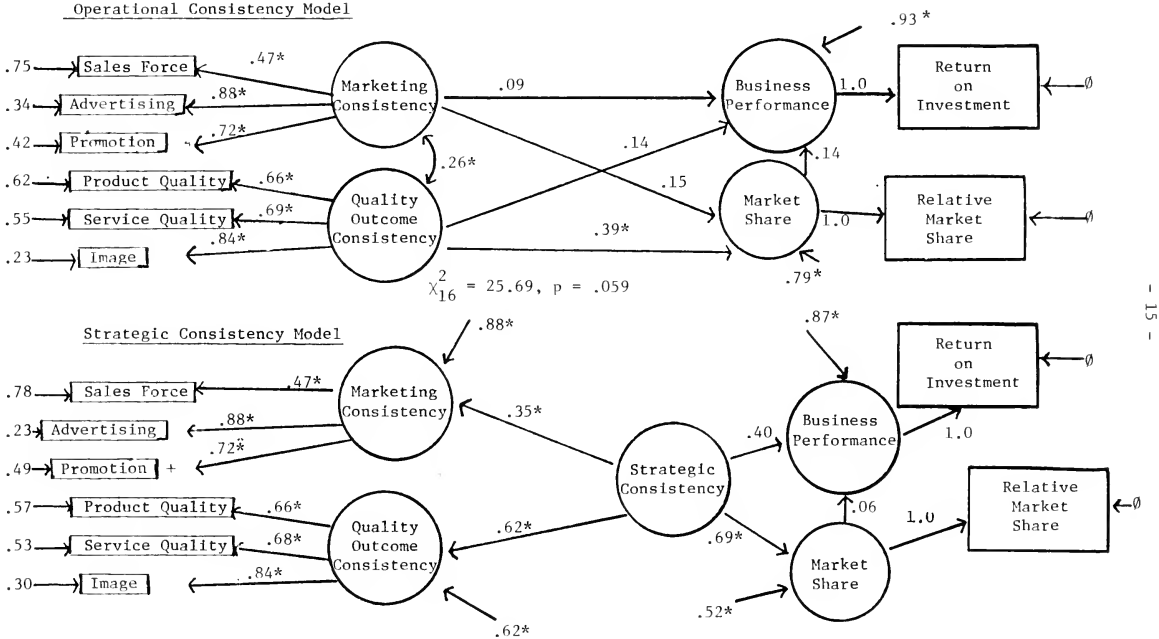


FIGURE 1

Second Order Factor Model of Strategic Consistency

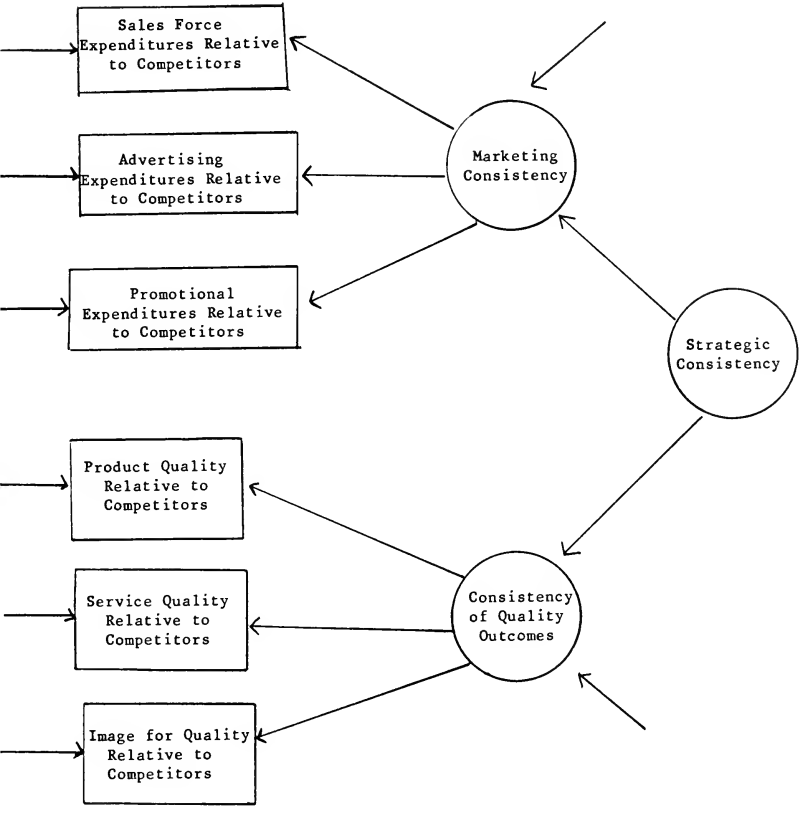
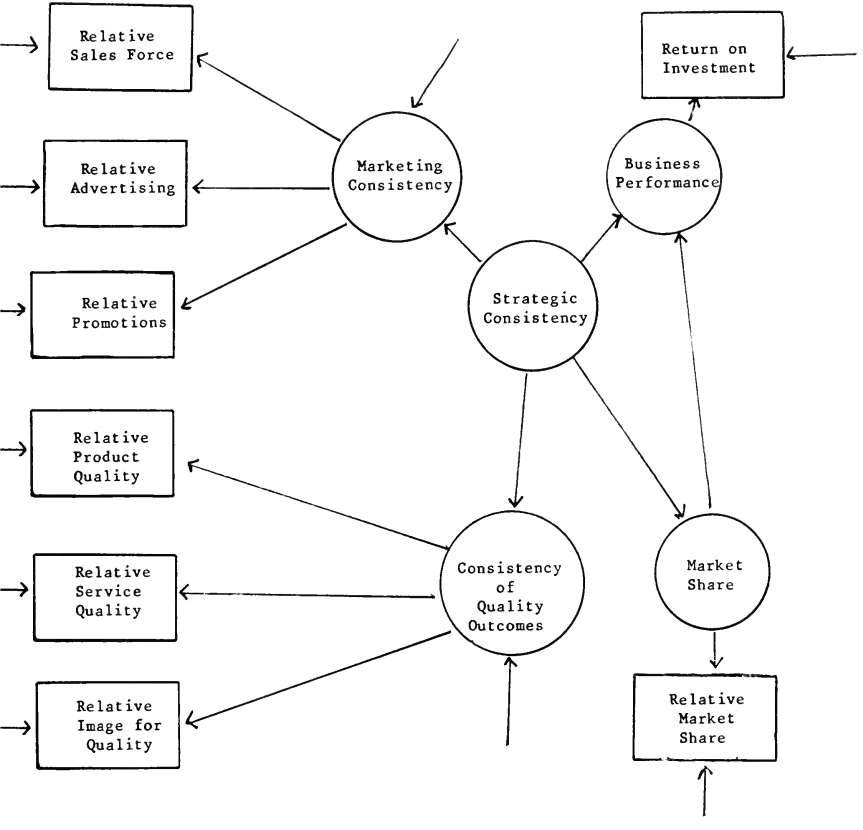


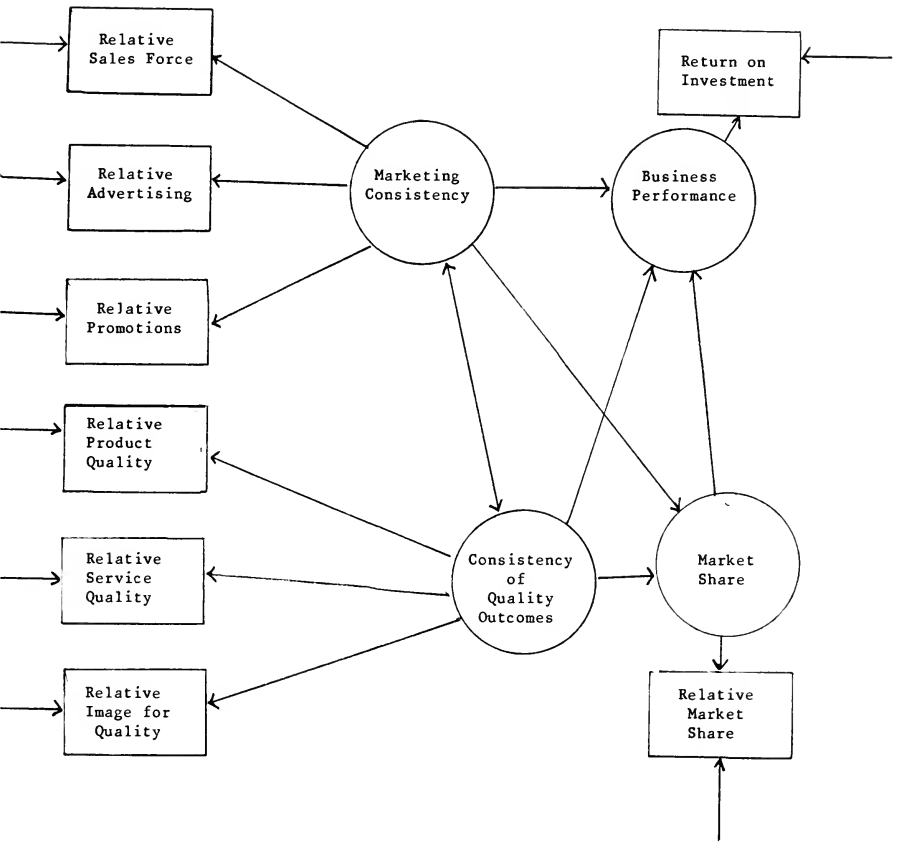
FIGURE 2

Strategic Consistency, Operational Consistency and Business Performance

a. Strategic consistency, market share and return on investment



b. Operational consistency, market share and return on investment



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